Liebert® PSA™

Quick-Start Guide - 1000VA/1500VA, 120V

EMERSON Network Power

IMPORTANT SAFETY INSTRUCTIONS

SAVE THESE INSTRUCTIONS

This manual contains important instructions that should be followed during installation and maintenance of the UPS.

- Intended for installation in a controlled environment.
- Maximum ambient temperature 104°F (40°C).

CAUTION

To reduce the risk of fire, connect only to a circuit provided with 20 amperes maximum branch circuit overcurrent protection in accordance with the national code, ANSI/NFPA 70.

- Do not connect equipment that may overload the UPS or demand half-wave rectification, such as a laser printer.
- Connect the UPS only to an earthed / grounded outlet that meets national and local electrical safety guidelines.
- Locate the UPS near a wall outlet. Do not use an extension cord between the UPS and the outlet.
- The Liebert PSA has been designed for small office/home office use only; it is NOT recommended for use in life-support applications.
- In the event of an emergency, press the OFF button and disconnect the power cord from the AC power supply to properly disable the UPS.
- Do not attach power strips or surge suppressors to the UPS.
- Do not attempt to service any parts inside the UPS except the batteries. Failure to adhere to this could cause personal injury or equipment malfunction and void the warranty.
- For technical support:
  - Visit **www.liebert.com** or
  - Send an e-mail to **upstech@emersonnetworkpower.com**.

SETUP

Step 1 Inspect the Package

Inspect the package and the UPS upon receipt. Notify the carrier and dealer of visible damage.

UPS

Liebert shutdown software CD

Quick-start guide

USB cable

Step 2 Decide Where to Place the UPS

The UPS must be placed indoors, protected from water, direct sunlight and excessive heat.

Provide at least 4" (100mm) of clearance on all sides of the unit for proper ventilation.

Step 3 Charge the UPS Battery Before Use

The UPS battery is not charged before shipping. It MUST be charged before use.

- Connect the UPS power cord to a wall outlet and charge for at least eight hours.

Note: If battery is placed in storage, charge the battery every six months if kept at 5°F to 85°F (-15°C to 29°C)—or every three months if kept at 86°F (30°C) or higher.

Step 4 Start the UPS

After the battery is fully charged:

- Turn on the UPS by pressing the On/Off button (see **Figure 1** below).
  LED 1 should be illuminated (green), indicating the UPS is operating in Normal Mode.

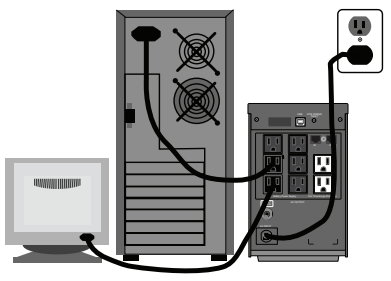
Step 5 Check the Site Wiring Fault Indicator

See figure at right for the location of the Site Wiring Indicator on the rear of the UPS.

- Check the rear of the UPS to make sure the Site Wiring Fault indicator is NOT illuminated.

Caution: If the Site Wiring Fault indicator is illuminated, have a qualified electrician check the wall receptacle wiring and fix any problems.

Step 6 Connect the Loads

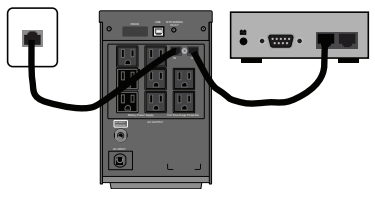


The UPS has three battery backup outlets that provide power when the UPS operates on battery (see **Figure 2** below).

- Plug the loads into the battery backup outlets on the rear of the UPS.

Caution: Do not connect a laser printer to the UPS.

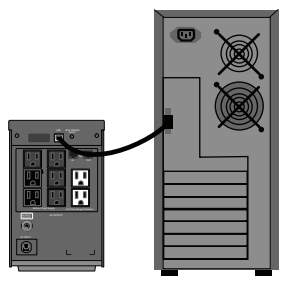
Step 7 Connect the Network Surge Protection



The UPS has two RJ-45 jacks for network lines (see **Figure 2** below).

- Connect a single-line network cable into the RJ-45 network surge protection IN jack on the rear of the UPS.
- Connect an RJ-45 cable from the OUT jack on the rear of the UPS to a port on a PC or network device such as a router.

Step 8 Set Up Liebert shutdown software



To start using the Liebert shutdown software:

- Install the Liebert shutdown software. See the software user manual for installation instructions.
- Connect one end of the USB cable (supplied) to the USB port on the rear of the UPS. Connect the other end to a USB port on the computer. See the software user manual for operating instructions.

UPS CONTROLS AND CONNECTIONS

Figure 1 - Front Panel LEDs

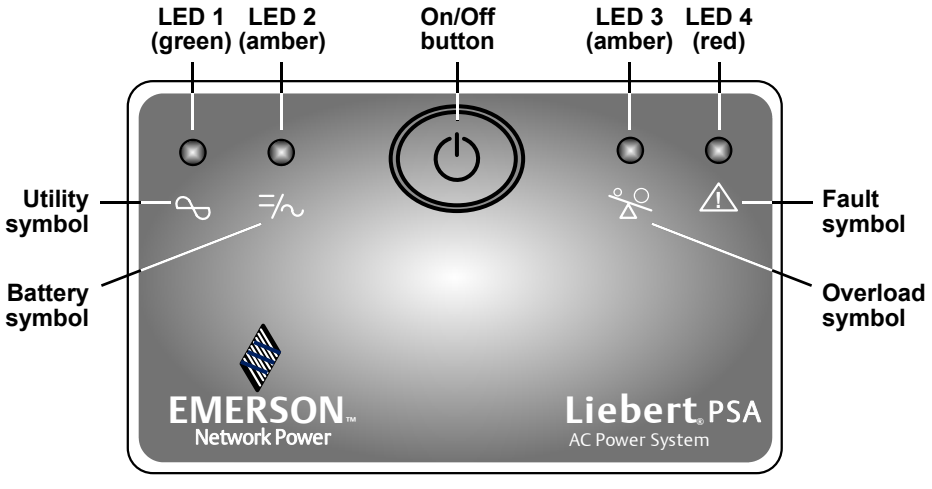
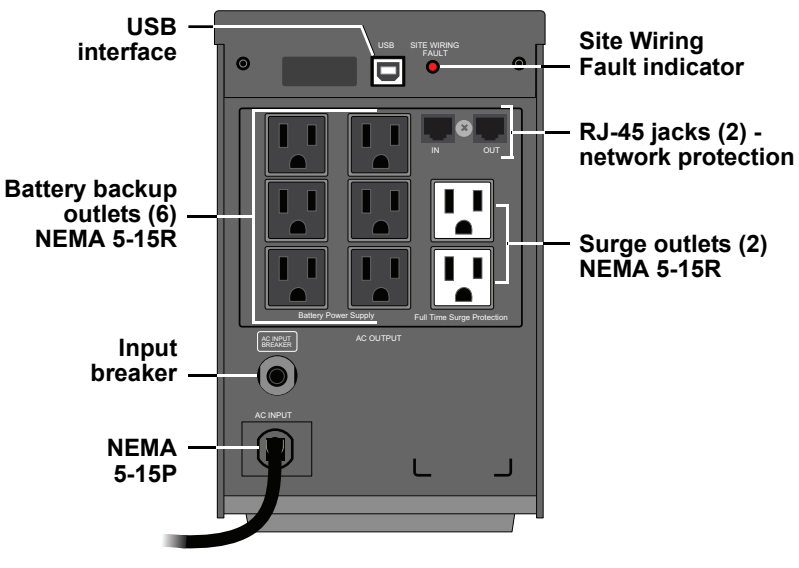


Figure 2 - Rear Panel



UPS Status, Alarm Conditions and Alerts

Condition	LED	Color	Solid/Flashing	Audible Alarm
Normal Mode	LED 1	Green	Solid (steady glow)	(None)
Battery Mode	LED 2	Amber	Flashes every 3 seconds	Every 3 seconds
Battery Low	LED 2	Amber	Flashes every 1 second till end of discharge (EOD)	Every 1 second
Overload	LED 3	Amber	Solid (steady glow) until load drops or breaker trips	Continuous
Battery Replacement	LED 4	Red	Flashes every 1 second for 5 seconds only	Every 1 second for 5 seconds only
Fault	LED 4	Red	Solid (steady glow) until UPS shuts down after 5 seconds	Continuous until UPS shuts down

Replacing the Battery

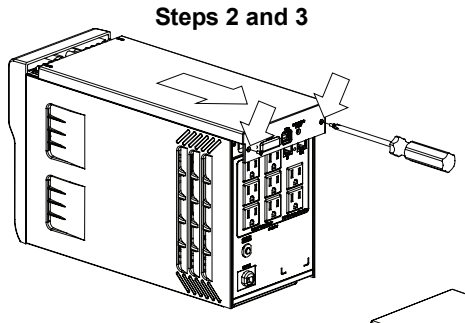
To replace the battery:

1. Turn off all connected loads, then turn off the UPS (batteries are NOT hot-swappable).
2. Use a Phillips head screwdriver to remove the two top cover screws from the back of the UPS.
3. Slide the top panel backward 1/2" (13mm). Slide the front panel upward, then pull outward to remove it.
4. Gently pull the batteries out of the UPS.
5. Remove the black wire from the negative (-) terminal and the red wire from the positive (+) terminal.
6. Verify that the replacement battery matches the dimensions and battery type in the **Specifications** section below.
7. Connect the battery leads to the new batteries. Be sure to reconnect the red wire to the positive (+) terminal and the black wire to the negative (-) terminal.

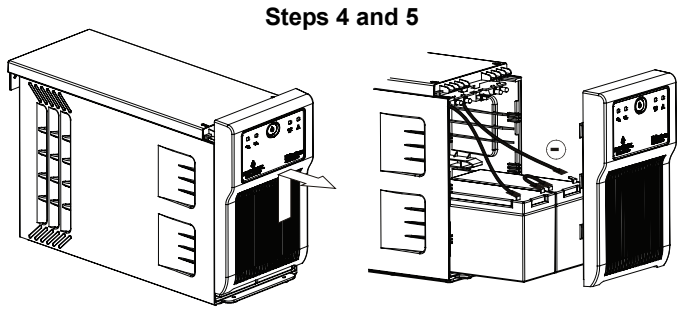
   Note: Small sparks may occur at the battery connectors during reconnection.
8. Slide the batteries into the UPS.
9. Reposition the front panel and slide downward until it slides into place. Slide the top panel forward until flush with the front panel. Reinsert the two top cover screws removed in **Step 2**.

Dispose of the old batteries properly at an appropriate recycling facility.

Steps 2 and 3



Steps 4 and 5



Troubleshooting

If the UPS malfunctions during operation, check the following chart for proper adjustment. For further assistance, please contact your local Emerson Network Power representative.

Problem	Possible Causes	Solutions
Utility power is normal, but LED 1 is not illuminated.	The UPS may not be turned on. The power cord may not be connected properly. The upstream input circuit breaker may be tripped.	• Press the On/Off button to turn on the UPS. • Connect the power cord securely into a wall outlet. • Reset the input circuit breaker.
LED 2 flashes (amber) every 3 seconds, but there is no output power.	Battery voltage may be too low.	• Recharge the UPS for 8 hours.
Alarm buzzer beeps continuously although utility power is normal.	The UPS may be overloaded (check LED 2).	• Disconnect some equipment from the UPS.
UPS does not provide expected backup time.	The UPS battery reached end of life.	• Replace the internal battery.
The UPS is on and connected to input power, but fails to operate properly.	Utility power may be outside the unit's operating range.	• If utility power is normal, try reconnecting input power and restarting the UPS.

Specifications

Model Number	PSA1000MT3-120U	PSA1500MT3-120U
Capacity (VA/W)	1000/600	1500/900
Net Weight, lb. (kg)	23.8 (10.8)	27.8 (12.6)
Shipping Weight, lb. (kg)	26.0 (11.8)	30.0 (13.6)
Dimensions - W x D x H, in. (mm)	5.8 x 14.2 x 9.2 (147 x 360 x 234)	
On-Line Input Voltage	84-140VAC	
On-Line Frequency	50/60Hz ±5Hz	
Output Voltage (Mains Normal)	Typical 97-129VAC	
Output Voltage (Battery Operation)	120VAC ±5%	
On-Battery Wave Form	Stepped sinewave	
Battery Type - VDC x Ah x Quantity	12V x 7Ah x 2	12V x 9Ah x 2
Typical Recharge Time	6-8 hours to 90%	
Battery Run Time* - Full Load	6 minutes	
Battery Run Time* - Half Load	12-13 minutes	
Audible and Visual	Audible alarm / LED	
Backup Outlets	NEMA 5-15R (6)	
Surge Outlets	NEMA 5-15R (2)	
Operating Temperature, °F (°C)	32 to 104 (0 to 40)	
Storage Temperature, °F (°C)	5 to 104 (-15 to 40)	
Operating / Storage Relative Humidity	0%-90%, non-condensing	
EMI Classification	FCC Part 15 Class B	
Agency		
Safety	UL 1778, c-UL Listed	
Transportation	ISTA Procedure 1A Certification	

* Battery run time may vary depending on load

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